analysis of a representative group of patients suffering from chronic thyroiditis with and without hyperplasia will be helpful to many of us who have occasion to study various types of goiter. I am, however, inclined to the belief that a correct diagnosis of chronic thyroiditis will remain exceedingly difficult, even with the suggestive hints that the authors have advanced.

Although I agree that medicinal and x-ray therapy is apt to be futile in this condition, I would urge a conservative surgical attitude as well, except in those cases where signs and symptoms and metabolic rate point to an associated hyperthyroidism. In pure chronic thyroiditis without compensatory hyperplasia, the inflammatory process is apt to be fairly diffuse and involve a considerable portion of the gland. It would seem to me an impossibly delicate procedure to remove just the diseased area and leave sufficient normal thyroid tissue for adequate function. It is true that a consequent post-operative hypothyroidism could be controlled by thyroid extract, but it would seem wiser not to interfere at all unless hyperthyroidism complicate the picture, or local pressure signs and symptoms demand relief.

I am much impressed with the conception that the pathological picture of a chronic thyroiditis, with the addition of hyperplasia, may afford a sound and logical explanation for the not uncommon "mixed" case, where evidence of hyper and hypofunction co-exist in the same individual, a circumstance that has heretofore "mixed" the physician quite as much as the patient, and where a perverted or "dysfunction" has been assumed as the only theoretical "out" from a contradictory situation.

This paper affords a fine example of clinical pathological co-operation.

The present vogue among women to become thin and willowy in order to comply with fashion's dictates has been attended with so many evil results in the way of impaired health that a plea has been made to medical men to discuss the subject from the health standpoint. Accordingly the question of whether women should reduce and how, if they are to retain their health, was debated in New York on February 22 at a gathering of physicians, dietitians, and statisticians at the New York Academy of Medicine, under the direction of the American Medical Association. The meeting really was called at the request of Mrs. William Brown Melloney, editor of the Delineator, who asked medical authorities to provide some age, weight and height tables to guide women in determining at what weight they would be healthiest, and possibly to suggest some means by which the question of how to reduce might be answered. In the discussion that resulted one of the speakers said that he was told by Poiret, the French dressmaker, that American women were almost the only women in the world who wanted to look like barber poles. Other speakers called attention to the evil effects of improper dieting and the use of drugs in an effort to reduce. One of the serious results of reducing is in the production of sterility. Overexercise, rolling machines, starvation diet, going without water, the use of thyroid, iodine, and smoking to excess, all were condemned as injurious. The untutored person frequently eliminates vitamines from his food by doing without cream, butter and other foods, thus bringing about an unbalanced diet that is very harmful and may lead to a pathological condition. The consensus of opinion was that no reducing should be undertaken except under the advice of a competent physician, and that all women need a well-balanced ration, but that there would be less tendency to accumulation of fat if the well-balanced ration is limited in amount and with the requisite amount of sleep, and with temperate habits. The American women were further admonished that it is better to be reasonably fat and healthy than to be thin and sickly.—Journal Indiana Medical Association, March, 1926.

All over the country Charleston marathon contests are being held. Usually four or five of the contestants jig for some thirty hours, and are then carried to the city hospitals in a state of collapse. Silly? Of course. And what an absurdity it is for the cities to allow such contests and then care for the winners at the public's expense. —The Outlook.

SOME SURGICAL ASPECTS OF TUBERCULAR PERITONITIS

By CHARLES D. LOCKWOOD *

Brief report of two cases, with discriminating digest of current practices in diagnosis and treatment.

DISCUSSION *by W. R. P. Clark, San Francisco; E. C. Moore, Los Angeles; C. T. Sturgeon, Los Angeles.*

TUBERCULAR peritonitis is a border-line affection concerning the surgeon and physician, including the tuberculosis specialist. Some recent experiences have impressed me with the fact that it is often overlooked, and that it is not given sufficient weight in the average physical examination. Its relative rarity and the obscurity of its symptoms account for our failures to detect it.

Before the discovery of the tubercle bacillus several forms of chronic peritonitis were recognized and described under different names, chief of these being the so-called chronic idiopathic peritonitis. Most of these cases were, doubtless, of tubercular origin, but there is still a small number of cases in which the specific cause is not clear. Although we now recognize the tubercle bacillus as the specific cause of tubercular peritonitis, there is still much difference of opinion as to the pathologic anatomy of the disease and its mode of invasion. It is impossible to demonstrate the tubercle bacillus in many cases of chronic peritonitis, even when the characteristic lesions, i. e., tubercles, are present.

While there are many interesting factors in the causation of the disease, such as age, heredity and trauma, the greatest interest centers in the mode of infection. Most authorities agree that the peritoneum is rarely the site of the initial lesion. The vast majority are secondary to some other focus, but the avenue by which the infecting organism

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actually reaches the peritoneum can seldom be demonstrated. One of my patients, in whom a tuberculous retroperitoneal gland had ruptured into the peritoneal cavity, suggested the possibility of direct contact infection as a fairly common occurrence.

It is questionable whether the tubercle bacillus ever implants itself directly on the peritoneum. Most pathologists deny such a possibility. One would naturally think of the intestine as a common source of infection, since those suffering from pulmonary tuberculosis are constantly swallowing myriads of bacilli. Such mode of infection would seem plausible in the presence of tubercular ulcers in the intestine, in view of the well-known fact that colon bacilli readily penetrate a damaged intestinal wall and invade surrounding structures. The fact remains that primary infection of the peritoneum has never been proven.

The primary focus of disease can seldom be discovered post mortem because of the advanced stage of the disease, and at operation the limited exposure permissible offers little opportunity for investigation. There is experimental evidence to prove that direct infection of the peritoneum may result from the injection of tubercle bacilli into the mesenteric arteries, and the frequency of the disease in children suggests the possibility of lymphatic transmission of the disease.

I have encountered several cases of tubercular appendicitis in young people with predisposition to tuberculosis, in which the retroperitoneal lymph nodes were caseous, and in one instance tubercle bacilli were demonstrated in the enucleated glands. In view of these facts, it seems reasonable to suppose that infection travels from the intestine to the lymph glands, and that these in turn break down and discharge tubercle bacilli into the peritoneal cavity.

The well-recognized routes of invasion are:

1. Hematogenous. This is undoubtedly a common mode of invasion. Generalized miliary tuberculosis, involving the peritoneum, can hardly be explained in any other way. Such infections often follow operations upon the tuberculous foci in individuals of low resistance. There is little reactive inflammation in such cases, such as peritoneal exudate, adhesions and thickened mesentery, and they are rapidly fatal. Case 2, reported below, was doubtless of this type.

2. Lymphatic extension. These lesions are of a progressive nature, more chronic in form, and lead to inflammatory reaction. They are most apt, according to Friedlander, to lie in the intestinal submucosa, in the lymph glands, and lymphatics. It is often difficult to distinguish such lesions from those arising from continuity, for contiguous lymphatic nodules may coalesce and break down.

3. Continuity. By this is meant the extension of the tuberculous process from one organ or tissue to the other without the intervention of healthy tissue. The most common illustration of this form of infection is that arising from the Fallopian tubes. There is still much disagreement as to whether infection travels from the Fallopian tubes to the peritoneum or the reverse. Dr. H. R. Wahl, reporting ten cases of tuberculous salpingitis, maintains that the route of infection is from the peritoneum to tubes, the bacilli being carried into the tube by ciliary action and by the muscular movements of the tube. The bacilli find a more favorable nidus in the mucosa and submucosa of the tubes. Experimental evidence supports this theory. It is further supported by the fact that tubercular peritonitis recovers, in the vast majority of cases, after removal of the infected tubes. The extension of tuberculosis by continuity is of great surgical importance, because it is possible to remove the disease and bring about complete restitution. Abdominal organs, such as the Fallopian tubes, the appendix, and the cecum can be completely removed surgically and infection of the peritoneum prevented. Where tubercle bacilli once gain access to the peritoneal cavity, extension takes place by diffusion and gravity.

The tubercle, which is the essential lesion in all forms of tuberculosis, is often confused by surgeons with carcinoma nodules. Since the microscope and histologic examination have come to play such an important role in diagnosis, surgeons have lost the keen powers of observation which characterized the older clinicians and, as one author has said, "The recognition of the tubercle by the unaided eye has become a lost art."

Two forms may be distinguished at the operating-table: (a) the very small, superficial submiliary type, affecting chiefly the surface of the peritoneum, and (b) the larger miliary type which invades the deeper structures of the peritoneum and in which there is a tendency to fibrosis. Both forms may be distinguished from carcinoma nodules by their tendency to caseation and by the fact that the latter tend to dimpling or umbilication of their summits.

The differential diagnosis between tuberculosis and carcinoma of the peritoneum is not always possible. The symptoms and physical signs are often identical. The chief of these are gastro-intestinal disturbances, ascites, enlarged retroperitoneal glands, swelling and tenderness of the abdomen, thickened omentum, tumor-like masses in the abdomen, and vague, more or less constant, abdominal pain. Chief reliance must be placed upon the history and the age of the patient. Tubercular peritonitis is almost invariably associated with tuberculosis elsewhere, and the vast majority of cases are in individuals under 40.

Mild cases of tubercular peritonitis are commonly overlooked. I know of no abdominal disease in which so many symptoms and signs common to other diseases are present. Symptoms such as fever, malaise, and rapid pulse are common to all infectious diseases. Laboratory tests are of little value, as the bacilli can rarely be found. The tuberculin skin test is unreliable, owing to the frequency of tuberculosis in other organs. The white blood count is rarely high, but there are notable exceptions. The abdominal signs are all simulated by other diseases, such as appendicitis, tumors, and ascites.

Treatment—The treatment of tuberculous peritonitis is not very satisfactory. The disease was considered invariably fatal prior to the work of Koenig in 1884. Since that time many methods of treatment have been advocated. A review of recent lit-

erature would indicate that there are three methods of treatment of undoubted value.

First. *Operative Treatment*—Collected statistics from all parts of the world show from 50 to 70 per cent of recoveries after laparotomy. Cases untreated show a much higher mortality. Cases suitable for operation are those of the exudative type. Operation should not be performed before the fourth month of the disease. In the early stage, the bacilli are too virulent to permit operation, and the exudate at this time is beneficial, acting as an antitoxin. The technique of the operation is simple. A median-line incision below the navel, sufficiently long to permit of thorough exploration. If infected organs are found, such as tubes, appendix or intestine, they should be removed. The wound is closed without drainage. The consensus of opinion seems to be that the operation does good by producing a hyperemia and stimulating the circulation.

Second. The introduction of air or oxygen into the peritoneal cavity is undoubtedly of value in this disease. Many cases of cure, after pneumoperitoneum, have been reported in both foreign and American literature. Filtrated air or oxygen may be forced into the abdomen, either through a needle puncture in the abdominal wall or through the Fallopian tubes in women. The air probably acts in the same manner as in laparotomy by stimulating active hyperemia in the peritoneum.

Third. *Treatment by Heliotherapy*—Tuberculosis in all its forms has been cured by this method of treatment. Whether the chemical rays come from the sun or are artificially produced, the result is the same. Gerstenberger and Wahl report two cases treated by the mercury quartz lamp with apparent cure. The remarkable results of Rollier in the treatment of all forms of surgical tuberculosis are well known. There are many other methods of treatment advocated for tubercular peritonitis, but they are of doubtful value. Whatever method is employed, the well-recognized hygienic, dietetic and medicinal measures should be used as adjuvants.

CASE REPORTS

I. Mrs. W. A. C. A young married woman. For several years she complained of pain in her right lower abdomen. Three months prior to consulting me she had a typical attack of acute appendicitis, with pain, fever, vomiting, and right rectus rigidity. Tenderness persisted for a month or more following this attack, and subsided gradually. One month later she had a similar but less severe attack at her menstrual period. For two days prior to operation she had been miserable with gas pains. She had no nausea, no respiratory symptoms, and no urinary difficulty. Six months previously she had had an attack of acute pyelitis.

The examination was negative except for tenderness and slight rigidity in the right iliac fossa and tenderness on deep palpation to the left of the midline at the level of the navel. At operation the appendix was found free from adhesions and little evidence of recent infection. It seemed insufficient to explain the symptoms, and further search was made. A conglomerate mass of caseating glands was found in the mesentery of the ileum. This mass was necrotic and at the point of rupture. The glands were enucleated and the abdomen closed without drainage.

The histologic examination showed no evidence of tuberculosis in the appendix. Smears from the pus found in the glands showed many leucocytes, but no bacteria. There was much caseous material and calcareous granules characteristic of tubercular pus.

The patient fully recovered and has had no recurrence of her attacks.

II. Mrs. L. Y. A young married woman 26 years of age. Called to see her in consultation March 1, 1924. Patient had been well up to three months prior to my visit, when she suffered an attack of influenza from which she never entirely recovered. Her most marked symptoms were loss of weight, slight cough, abdominal tenderness, most marked in the epigastric region, vomiting, which always occurred at night and which bore no relation to food.

Physical examination revealed no disease of the lungs. The patient was extremely emaciated, her abdomen was tender and rigid all over. On the left side of the abdomen was a tumor mass the size of a lemon, which moved on respiration and was entirely below the rib margin. The blood showed a marked secondary anemia, with a hemoglobin of 55 per cent. The urine was negative, except for a trace of albumin and three plus indican. The radiographic examination was negative, both as to the lungs and the abdomen. A tentative diagnosis was made of either tubercular peritonitis or carcinoma of some abdominal organ.

Operation—March, 1924. An exploratory operation was done for diagnostic purposes. The intestine was found extensively adherent to the abdominal wall, and the peritoneal coat was covered with miliary tubercles.

Pathologic Examination—Histologic examination of small pieces of excised peritoneum showed caseating miliary tubercles. No bacilli were found. The patient died of inanition and exhaustion.

I might report a number of similar cases, but these are enough to emphasize the obscure character of the disease and its insidious onset. Patients complaining of vague abdominal pains, with distension, rapid loss of weight, a continuous fever, and marked leucopenia should be suspected of having tubercular peritonitis.

DISCUSSION

W. R. P. Clark, M. D. (516 Sutter Street, San Francisco)—The subject of Doctor Lockwood's paper is of extreme interest to me, and while it deals primarily with tubercular peritonitis, it opens up a large field for discussion, namely, abdominal symptoms in the tuberculous. Many of these symptoms are toxic or reflex, particularly those in the upper abdomen, some are due to enteritis without an involvement of the peritoneum when the symptoms are first noticed, some to pelvic disorders as Lockwood has mentioned, some to inflammatory changes in the region of the appendix, and some to diseased conditions in other organs. In our work (diseases of the chest) most of the cases we see are secondary to lung lesions, and I wish to emphasize the point of always looking for the focus of infection in suspected tubercular peritonitis cases. I have seen patients where the abdominal symptoms so overshadowed the lung symptoms that an advanced lesion in the lung was entirely overlooked until after some abdominal operation had been performed without material relief to the patient. I believe in cases of tubercular peritonitis, complicating tuberculosis of the lungs, heliotherapy or other light treatment should be given a trial before surgical interference.

E. C. Moore, M. D. (511 South Bonnie Brae Street, Los Angeles)—Dr. Lockwood has covered the subject well in his excellent paper, and there is little to add to that given by him and Dr. Clark.

There has been much discussion as to whether surgery or medical treatment gives better results in these cases of tubercular peritonitis, and as a consequence numerous statistics have been recorded by physicians and surgeons. Opinion is still somewhat divided, but on the whole, perhaps, laparotomy under proper restrictions is most in favor. However, to my mind, there should be a combination of both, and certainly medical and hygienic treatment should be tried before surgery is attempted in the average run of cases. For that matter, such treatment would be as essential in the post-operative care as in the pre-operative. Heliotherapy seems to be giving good results also. Claims have been made of cures from 40 to 80 per cent by the adherents of both surgical and medical treatment.

Tubercular peritonitis may assume an acute or chronic

form. The chronic form seems more amenable to treatment. My experience has shown me it is unwise to operate in the febrile stage. In the exudative type there is usually too much fever and emaciation to attempt surgery at once.

Patients for surgery must be selected: those with effusion are usually chosen; the "dry" and ulcerative cases avoided, and cases with extensive tuberculosis elsewhere are contra-indicated. In suitable cases surgery does accelerate a cure.

C. T. STURGEON, M. D. (1136 West Sixth Street, Los Angeles)—As Dr. Lockwood has pointed out, the condition of tuberculosis of the peritoneum occurs more frequently than is recognized. It may be well to remember that it can occur in a latent form without symptoms, and discovered only at autopsy or during laparotomy for other conditions. Secondly, as is well known, the picture itself is often so very obscure, due to the great variety of its manifestations.

In the surgical treatment for the condition, W. J. Mayo in 1910 pointed out the importance of the fact that when the local lesion could be found and removed a cure might be expected when the section was taken through non-tuberculous tissue in a higher percentage of cases than by simple laparotomy. This holds especially true when the appendix, Fallopian tubes, or ileo-cecal coil are involved.

It is in this particular type that no regard is made as to whether the peritoneum contains fluid or not; but particular regard, as always, should be given to the question of tuberculosis elsewhere.

When the focus of infection cannot be found, then the remaining most favorable cases are those of the ascitic form.

Operation in the fibro-plastic form offers many possibilities for harm—structures are with difficulty recognized and resulting fistulas often occur, and the gut is very easily torn through.

The introduction of oxygen into the peritoneal cavity in cases of tuberculosis of the peritoneum undoubtedly has been of value in some cases; however, as has been stated, the diagnosis, if often obscure, there is some slight risk of puncture of the intestines in introducing a needle through the abdominal wall and, it seems to me, that a laparotomy is more often indicated because:

1. If there be a local focus of infection, such as tuberculous appendix, etc., it can be removed.
2. The air is introduced at the time of the laparotomy and fluid, if present, freely drained.
3. The diagnosis, which is often obscure, is made definite by a laparotomy.

Important—Surgical cases of tuberculosis of the peritoneum should be selected cases when a possibility of cure is expected.

Some cinchona trees being thrown into a pool of water in Peru lay there till the water became so bitter that everybody refused to drink it. However, one of the neighboring inhabitants being seized with a violent paroxysm of fever, and finding no other water to quench his thirst, was forced to drink of this, by which he was perfectly cured. He afterward related the circumstance to others, and prevailed upon some of his friends, who were ill of fever, to make use of the same remedy, with whom it proved equally successful. But it was not only the casual experience of an uncivilized people which discovered this valuable remedy, but the first prejudices against its use, which were very strong, were counteracted by the influence of a religious sect (the Jesuits), totally unconnected with the practice of medicine; and physicians were ultimately taught how to use it with effect by a man who was vilified both at home and abroad as an ignorant empiric. It is amusing to contrast this first rude natural infusion with the present neat and condensed form of exhibiting the bark: for now a grain or two of the sulphate of quinine is the ordinary dose of the remedy.—The Gold-Headed Cane.

We live in crowds, and crowds are cowardly. Perhaps this is why the American, who used to be independent to the point of absurdity and disputations beyond comparison, is becoming a moral coward.—Saturday Review of Literature, March 27, 1926.

THE RECOGNITION OF PSYCHONEUROSES †

By JOHN B. DOYLE *

The time would seem to be past when it was necessary to make a diagnosis of psychoneurosis by exclusion. Hysterical patients exhibit exaggerated emotional excitability, marked variability in their complaints and findings, and remarkable non-conformity in their symptoms and signs, to the limitations imposed by the accepted conceptions of anatomy, physiology, and pathology. They are no less worthy of a complete history and thorough physical examination than other groups of patients. Either they must look to the medical profession for scientific advice, persuasion and re-education, or resort to the "Miracle Man" of "Miracle Mountain."

DISCUSSION *by John R. Llewellyn, Salt Lake City, Utah.*

IN ONE form or another, psychoneuroses constitute a great part of the work of all physicians, and are probably one of the greatest sources of unhappiness to people of all ranks of society. Every patient has an emotional as well as a physical side. Neglect of this truth has been fruitful in the development of Christian Science and the other cults and fads which have sprung up sporadically as far back as we have any record of medical history. In the desire of the people for emotional relief, they have been glad to accept almost any idea and any sort of management. The inability or failure to make adjustments throughout life lies at the bottom of many of these psychoneurotic disorders. The conception that anyone can develop a psychoneurosis or even hysteria, provided sufficient emotional strain is undergone, may not be entirely correct, but it does not fall far short of the mark. Heredity, however, plays a more important part in the development of most functional nervous disorders. The immediate causes are infinitely various, and constitute only "agents provocateurs," that is, exciting causes which merely rouse a latent disorder. The traumatic neuroses often arise as a direct result of shock, but hysteria in general is more usually the result of long-continued anxieties and more often due to the troubles inflicted by others rather than to those inherent in one's own lot. The importance of fear in the development of functional disorders can scarcely be overestimated. Who has not been impressed by the contrast between the morbid mental state of persons living in fear of tuberculosis, and the calm assurance of patients with well-developed tuberculosis living in sanitariums? A casual remark or an opinion from doctors, nurses, and at times even laymen, has often been the source of weird clinical pictures which have all but baffled medical men. That organic disease itself may bring about functional disturbances which distort to a greater or lesser degree the characteristic phenomena of the organic disease is well known.

Hysteria is a disease of the mind, manifesting

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† Read before the Utah State Medical Association, Logan, Utah, June, 1924, and before the Wyoming State Medical Society, Cody, Wyoming.

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